17-43

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the patent application of:)	
)	
William R. Camerer III et al.)	
)	
Title: Corn Plant Evaluation)	Art Unit 1743
)	
Serial No. 09/934,232)	Examiner: Yelena G. Gakh
)	
Filed August 21, 2001)	

AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated July 21, 2003, please amend the application as shown on the enclosed marked version of the entire set of claims showing the current status and changes made.

REMARKS REGARDING THE AMENDMENTS

Claim 1 has been amended to move the recitation that the compositional characteristics of the corn plant population are predicted from element (f) to the preamble. Claim 1 has also been amended to include the recitation that the representative plants from the population are selected based on visually surveyed characteristics. The basis for this amendment is original claim 2. Claim 2 has been amended by deleting this recitation.

REMARKS REGARDING THE SECTION 103 REJECTION

Claims 1 to 5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the abstract of the Jones et al. article entitled "Use of Near Infrared Reflectance Spectroscopy in Forage Testing" from Volume 70, No. 5 of the *Journal of Dairy Science*. The Applicants traverse this rejection.

A very brief review of the Applicants' invention may be helpful. The Applicants' invention is a method of predicting the compositional characteristics of a corn plant population. The method is especially useful in evaluating a population of corn plants for use as silage. The method comprises six steps: (1) selecting the corn plant population; (2) selecting a limited number of representative plants based on visually surveyed characteristics; (3) harvesting the representative plants; (4) grinding the representative plants into a homogeneous mixture; (5) analyzing a sample of the homogeneous mixture in a near infrared spectrometer; and (6) comparing the analysis with existing correlations.

The Applicants acknowledge that not all six steps in the method are novel. For example, it is well known that corn samples can be analyzed in a near infrared spectrometer and that the results can be compared to existing correlations. However, nothing in the prior art teaches or suggests the Applicants' overall method. In particular, nothing in the prior art teaches or suggests a prediction method in which a limited number of plants are selected based on visually surveyed characteristics and these individual plants are separately harvested, ground, and then analyzed. This selection and subsequent isolation achieves a surprising and unexpected improvement in predicting the characteristics of the population.

Prior art methods generally analyze samples from a mixture of *all* the plants in the population or from individual plants that are picked by *random*. The Jones et al. article is representative of the prior art. A Supplemental Information Disclosure Statement with a complete copy of the Jones et al. article is enclosed. As explained at pages 1086 to 1087, all corn silage samples "were submitted by farmers for routine analysis in the Virginia Tech forage testing program." As is typical in the prior art, there is no mention about *how* the samples were obtained. This omission illustrates the failure of the prior art to appreciate the importance the selection process has on the prediction. The Applicants presume that the samples submitted by the farmers were obtained in the customary way – the farmers harvested and ground large populations of corn plants, placed the silage into silos, and then took samples from the silos.

As detailed in the specification, this customary way of obtaining samples of corn silage does not provide a good representation of the population and therefore is a poor predictor of the characteristics of the entire population. The Applicants' method of selecting a limited number of plants based on visually surveyed characteristics and then harvesting, grinding, and sampling these representative plants provides a far better prediction of the characteristics of the entire population.

In view of the amendments and the above remarks, allowance of claims 1 to 5 is requested.

Respectfully submitted,

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CERTIFICATE OF MAILING

Philip L. Bateman certifies that this paper is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on October 13, 2003.

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